

Work Order ID: 56732

March 5, 2010 9:59:52 AM

Page 1

Item ID: D3391-015

Accept

Revision ID:

Item Name: Aft Tube Assembly

Start Date: 05/03/2010 Start Qty: 1.00

Required Date: 17/03/2010 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3391

Rev H

100

0.00

MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

Mori Seiki CNC Lathe Large

Turn as per Folio FA599 Rev: AA & Dwg D3391 Rev: H

Q-M 10 - 03 - 230

110

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

POSITIVE RECALL

EFFECTIVE

RELEASED

DATE 10.14.20

10 - 03 - 230

120

HAAS CNC VERTICAL MACHINING #1

0.00

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine as per Folio FA 599 Rev: AA & Dwg D3391 Rev: H
2-Deburr

sub 10/03/29

1 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

Page 2

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Start Date: 05/03/2010 **Start Qty:** 1.00

Required Date: 17/03/2010 **Req'd Qty:** 1.00

Reference:

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Customer:

Approvals:

Process Plan:

Date:

Tooling:**Date:**

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

**Insp.
Stamp**

130

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

140

QC8- Inspect parts - second check

0.00

QC

Memo

0.00

Quality Control

150

Skidtubes

0.00

Skidtubes

Memo

0.00

Skidtubes

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Item ID: D3391-015

Accept



Setup Start



Revision ID:

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Stop



Start Date: 05/03/2010 Start Qty: 1.00



Required Date: 17/03/2010 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160



CNC Bend 1

BENDING MACHINE - SKIDTUBES

0.00

CNC Delta 100 Bender

Memo

0.00

Form as per Dwg D3391

1 11/12/4/23

170



QC

QC5- Inspect part completeness to step on W/O

0.00

0.00

Memo

h = 4,200"

Quality Control

8/10/2013

100

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Required Date: 17/03/2010 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180



Skidtubes

Skidtubes

0.00

Memo

0.00

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill Tube as per D3391 using DT8808 (ALL HOLES)

3-Drill and c'bore wearshoe holes as per Dwg *****ensure wall thickness after c'bore is no less than 0.051*****

4-C'sink holes for float bag (4 holes per side) as per Dwg D3391
Deburr

5- Tranfer holes from D3391-013 for electric step in tube

190



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8 10/5/04

11 10/5/13

DP 10-5-4

FD

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

200

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

1 11/05/15

210

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Install crossbolt spacers per dwg D3391

A/R Magnabond 6398 batch: M114021

2- Grind flush

13x2 11/6/30

11/05/11

220

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/10/11

70

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

230



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

M 114841

REALIGNED @ BK 10-7-13.

PTO-D

Memo

0.00

START TIME: 3:45
OVEN TEMPERATURE: 320°
FINISH TIME: 4:15

DBL 10-7-13

240



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

M 10/07/19

x (D)

250



HandFinish

Hand Finishing

HandFinishing

0.00

0.00

Memo

✓ 1-Install inserts per dwg D3391

✓ 2-Install Aft Cap as per Dwg D3391

✓ A/R Sikaflex-241/-291 M165114
Sikaflex expiry date: 11/01

=> M 10/07/19

x / x

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
07-13		ADD THAT SEQUENCE PERMANENTLY REALIGNED.	BR	10-7-13	1		
				02-20			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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!								

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Work Order ID 56732

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Item ID: D3391-015

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 05/03/2010 Start Qty: 1.00



Required Date: 17/03/2010 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

260



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

8 10/07/00

20

270



Packaging

Packaging

Identify as per dwg & Stock Location:

used on w/o 56717

Memo

D412-742-041

0.00

0.00

= 2 10/04/20

1 9

280



QC

Quality Control

QC21- Final Inspection - Work Order Release

Memo

0.00

0.00

10-7-20

ME 10-7-20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 56732

Parent Item: D3391-015

Parent Item Name: Aft Tube Assembly

Comments: IPP rev A 05.12.13 New issue EC
IPP rev B 06.02.09 Dwg @ revD EC
IPP rev C 07.03.13 dwg @revF ec
IPP rev D 07.10.31 ecn 1053P EC

Start Date: 05/03/2010

Required Date: 17/03/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L

Purchased No

100

Each

388.0000 10.0000

washer

NAS1149C0332R

Warehouse

Location

OFFSHORE

FG

103585

Main Warehouse

ST

112116

112612

Loc Qty

Loc Code

1115000

100

100

288

128

160

210

Each

7.0000

1.0000

Warehouse

Location

Main Warehouse

LG

42768

Loc Qty

Loc Code

7

7

x10 10/07/19

MD 10-03-17

EX

6014-090

ALUMINUM EXTRUSION

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IPP rev C 07.03.13 dwg @revF ec
IPP rev D 07.10.31 ecn 1053P EC

Start Date: 05/03/2010

Required Date: 17/03/2010

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased No

250 Each 1,142.000 14.0000

Insert

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

110511

1142

1114723

x12 y1 10/07/19

1142

250 Each 6,116.000 12.0000

ALS4-1032-225

Purchased

No

Insert

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

6116

107441

16

10768

6100

250 Each 30.0000 4.0000

ALS4-428-165

Purchased

No

Inserts

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

30

6989

30

x4 y1 10/07/19

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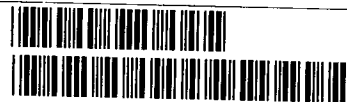
Picklist Print

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Work Order ID: 56732



Parent Item: D3391-015

Parent Item Name: Aft Tube Assembly

Comments: IPP rev A 05.12.13 New issue EC
 IPP rev B 06.02.09 Dwg @ revD EC
 IPP rev C 07.03.13 dwg @revF ec
 IPP rev D 07.10.31 ecn 1053P EC

Start Date: 05/03/2010

Required Date: 17/03/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C4A

Purchased No

250

Each

1,649.000 6.0000



BOLT



Warehouse

Location

Main Warehouse

ST

Loc Qty

Loc Code

1649

11114859

x6 M 10/07/19

112314

13

112720

12

112724

3

112829

1

112991

2

113121

64

113226

344

113644

110

113749

100

114103

500

114108

500

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IPP rev C 07.03.13 dwg @ revF ec
IPP rev D 07.10.31 ecn 1053P EC

Start Date: 05/03/2010

Required Date: 17/03/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C5A

Purchased No

250

Each

587.0000 4.0000



Bolt

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

587

1115015

x4 14 10/07/19

111424

8

111707

69

112314

1

113121

49

113149

160

114056

200

114108

100

D2646

Manufactured No

250

Each

48.0000 1.0000



Aft Cap

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP6

29

B57332

x1 14 10/07/19

52663

29

Main Warehouse

fp7

11

52663

11

Main Warehouse

ST

8

46327

4

48109

4

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Work Order ID: 56732

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 IPP rev B 06.02.09 Dwg @ revD EC
 IPP rev C 07.03.13 dwg @revF ec
 IPP rev D 07.10.31 ecn 1053P EC

Start Date: 05/03/2010

Required Date: 17/03/2010

Start Qty: 1.00

Required Qty: 1.00

D3537-1



Manufactured No

250 Each 85.0000 1.0000

Wearpad



Warehouse

Location

Loc Qty

Loc Code

Main Warehouse

FP

74

1359593

48288

2

55465

72

Main Warehouse

FP17

11

51678

1

51679

10

Manufactured No

250 Each

14.0000 1.0000

D3537-7



Wearpad



Warehouse

Location

Loc Qty

Loc Code

Main Warehouse

ST

14

45408

3

46346

11

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5/7

X1 M 10/07/19

X1 M 10/07/19

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 IPP rev C 07.03.13 dwg @revF ec
 IPP rev D 07.10.31 ecn 1053P EC

Start Date: 05/03/2010

Required Date: 17/03/2010

Start Qty: 1.00

Required Qty: 1.00

D3553-1 Manufactured No

250

Each

9.0000

1.0000



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

9

33868

9

D3553-3 Manufactured No

250

Each

58.0000

1.0000



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

58

53480

58

D3670-4-200 Manufactured No

250

Each

63.0000

14.0000



SPACER

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

63

48198

4

48269

59

B 56802

D 57349

②

③

11/05/15

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 IPP rev B 06.02.09 Dwg @ revD EC
 IPP rev C 07.03.13 dwg @revF ec
 IPP rev D 07.10.31 ecn 1053P EC

Start Date: 05/03/2010

Required Date: 17/03/2010

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

250

Each

1,618.000 2.0000

Phenolic Washer

Warehouse

Location

Main Warehouse

ST

1118

39275

19

42329

5

47628

94

52505

1000

Main Warehouse

ST117

500

(51674)

500

x2 10/07/19

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Shop Packet Print

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SHO...

RETURN TO

ENGINEER

UNCONTROLLED COPY

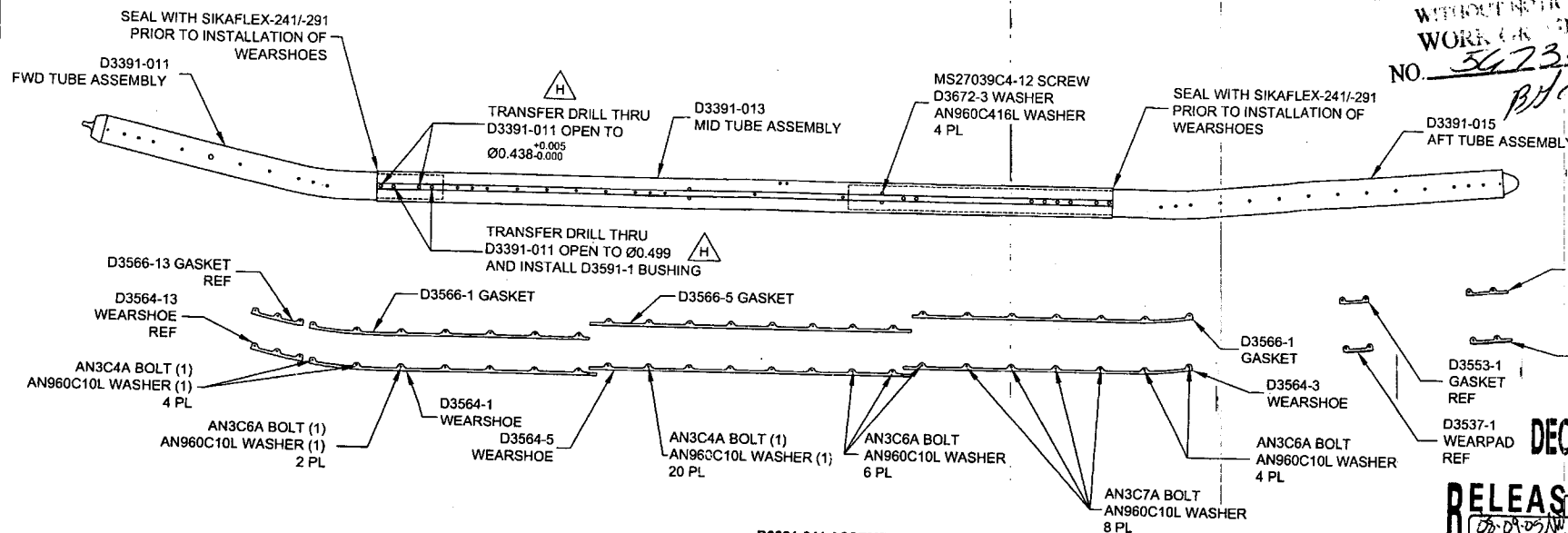
SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER

NO. 56732

P/H-3-05






D3391-041 ASSEMBLY

D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
2	D3566-3	GASKET
4	D3672-3	WASHER
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

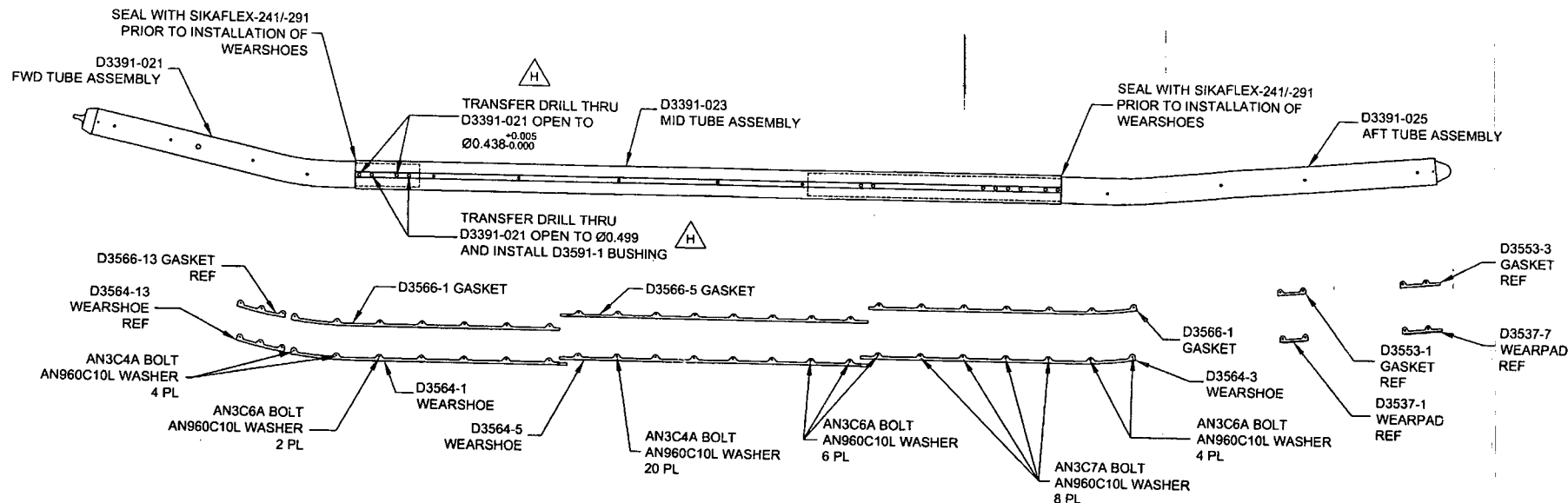
GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C/BOR AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO. D3391	REV. H SHEET 1 OF 8
MFG. APPR.		TITLE	SCALE
APPROVED		412 FLOAT SKIDTUBE	NTS
DE APPR.			
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DEO ATTACHED

RELEASED



D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER

GENERAL NOTES

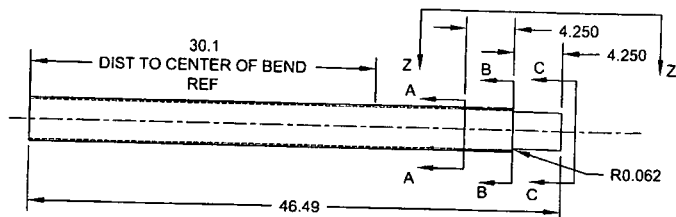
- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
UNITS: INCHES UNLESS OTHERWISE NOTED
- 3) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

DEO ATTACHED

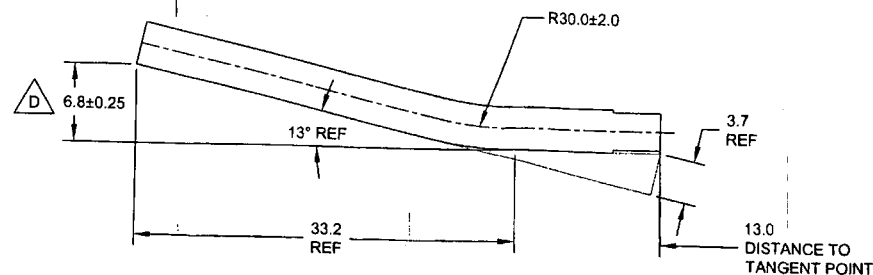
RELEASED
08-09-05/10

W10 54732

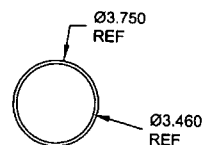
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 2 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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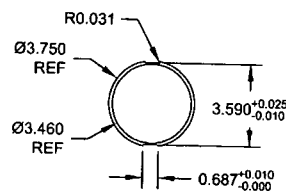
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



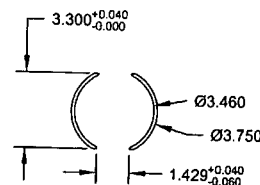
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



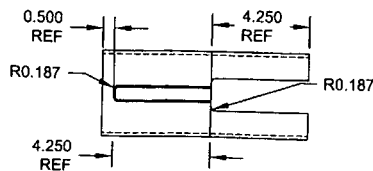
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X

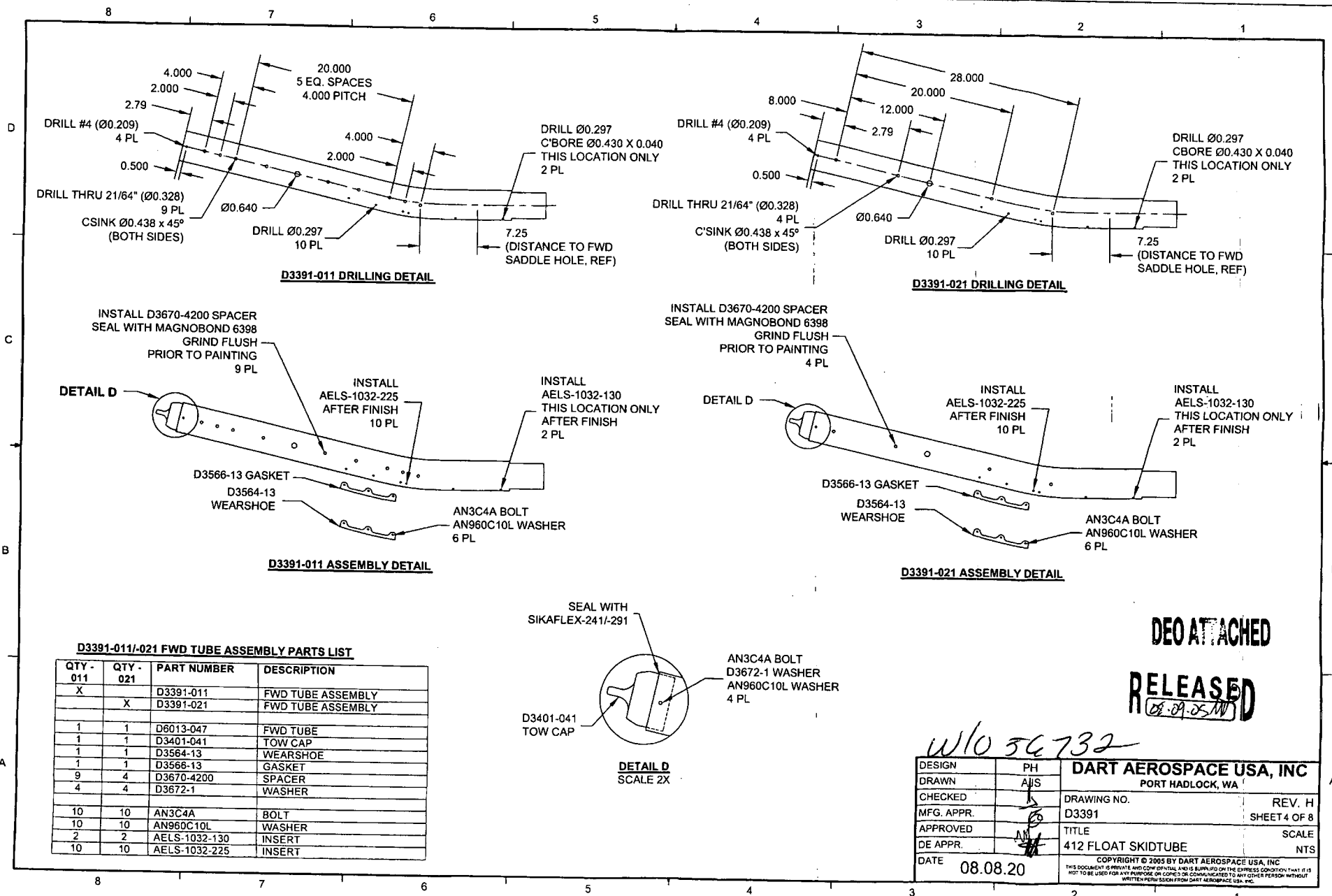


VIEW Z-Z
SCALE 2X

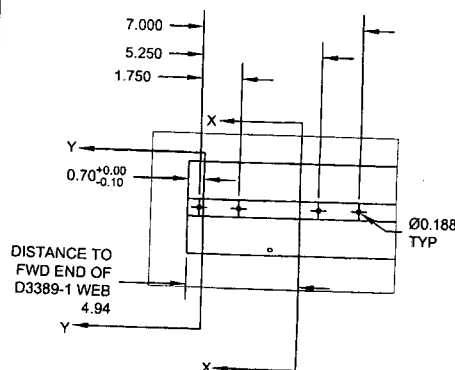
DEO ATTACHED
RELEASED
28 JAN 2001

W10 56732

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AUS	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D3391	REV. H SHEET 3 OF 8
MFG. APPR.		TITLE	SCALE
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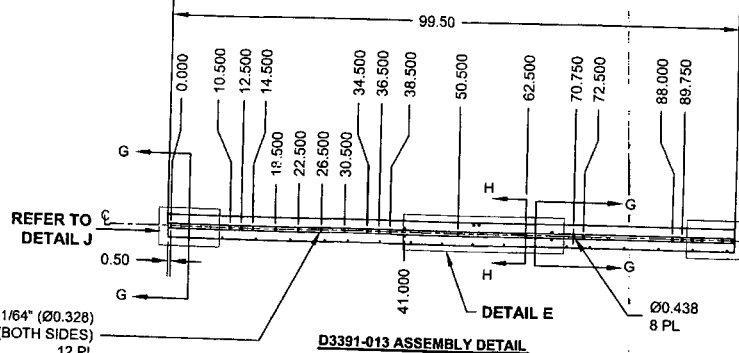


DEO ATTACHED
RELEASED
08-09-05 M

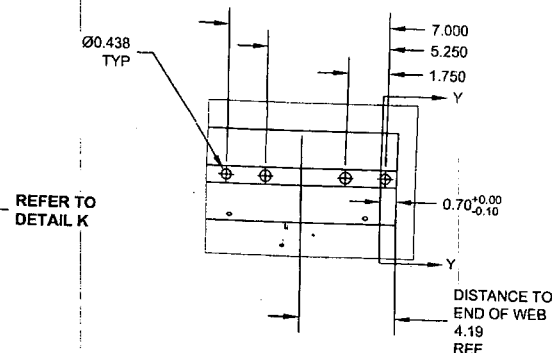


DETAIL J
SCALE 4X

DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL



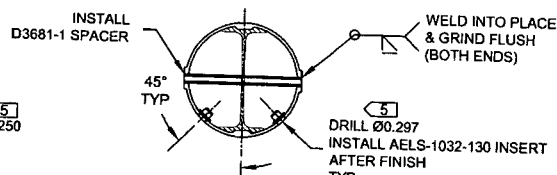
D3391-013 ASSEMBLY DETAIL
SCALE 5X



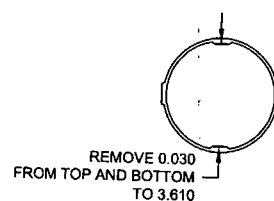
DETAIL K
SCALE 4X



SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X

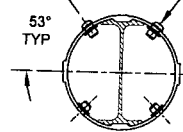


SECTION X-X
SCALE 5X

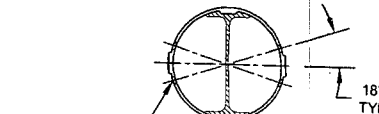
REMOVE 0.225
FROM TOP AND BOTTOM
TO 3.800
(0.7 FROM BOTH ENDS)

DRILL Ø0.297
INSTALL AELS-1032-130 INSERT
MS27039C1-09 SCREW
D3672-1 WASHER
AN960C10L WASHER
AFTER FINISH
4 PL

SECTION Y-Y
SCALE 5X



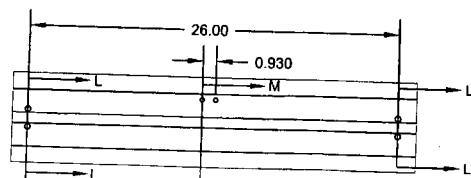
SECTION M-M
SCALE 5X



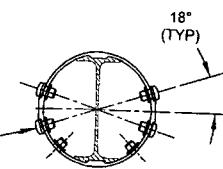
SECTION L-L
SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW



DETAIL E
SCALE NONE



SECTION L-L
SCALE 5X

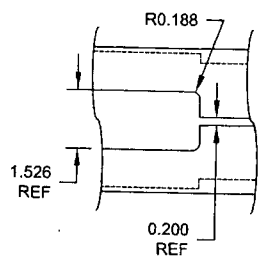
D3391-013 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

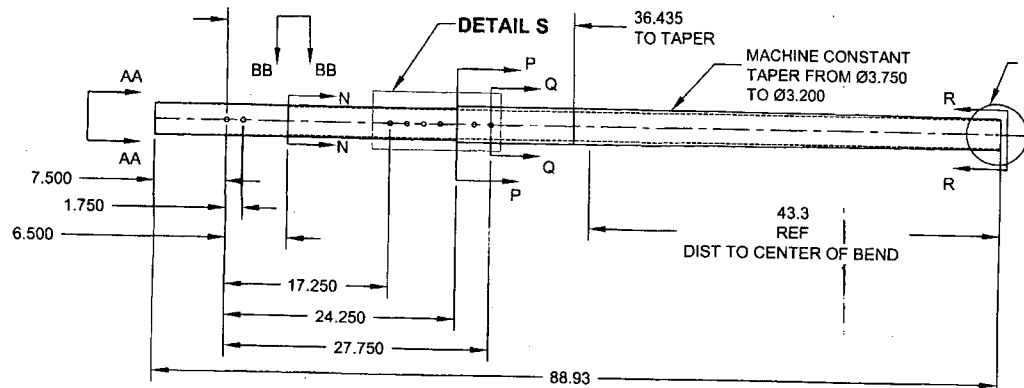
DEO ATTACHED

RELEASED

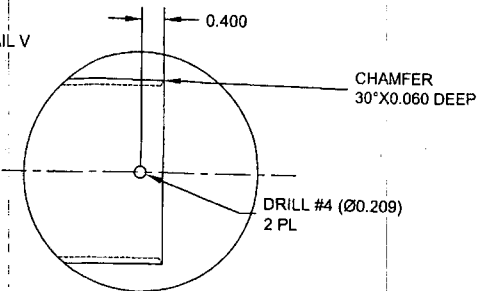
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AUS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 5 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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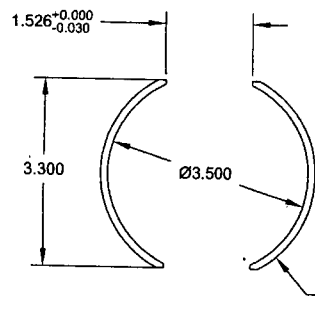
VIEW BB-BB
SCALE 4X



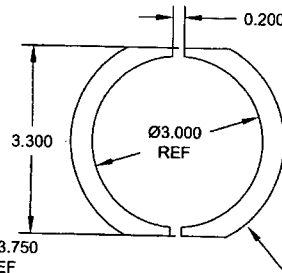
D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



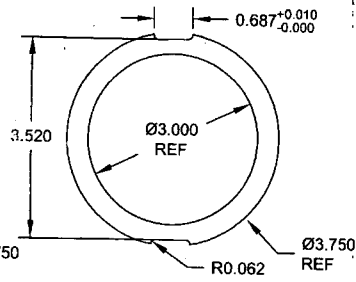
DETAIL V
SCALE 6X



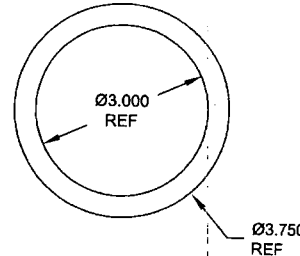
SECTION AA-AA
SCALE 6X



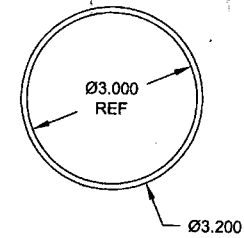
SECTION N-N
SCALE 6X



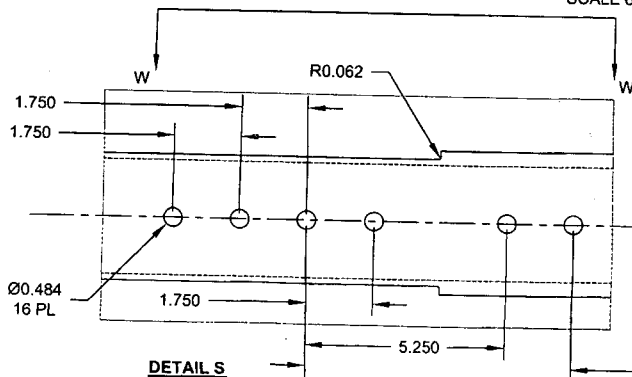
SECTION P-P
SCALE 6X



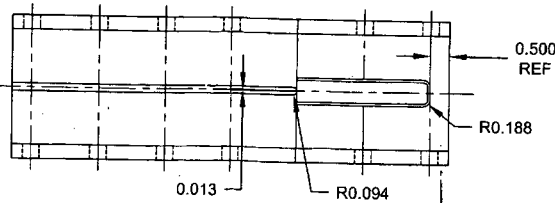
SECTION Q-Q
SCALE 6X



SECTION R-R
SCALE 6X



DETAIL S
SCALE 4X

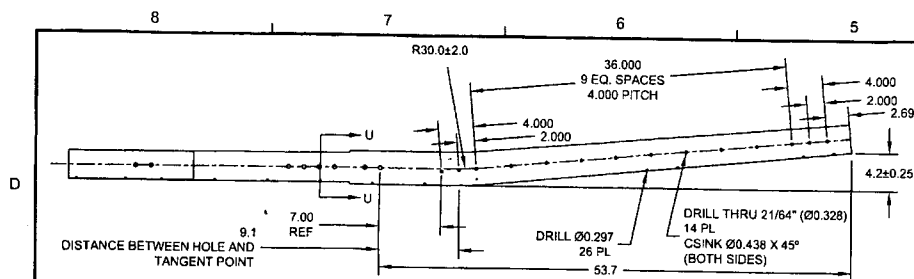


VIEW W-W
SCALE 4X

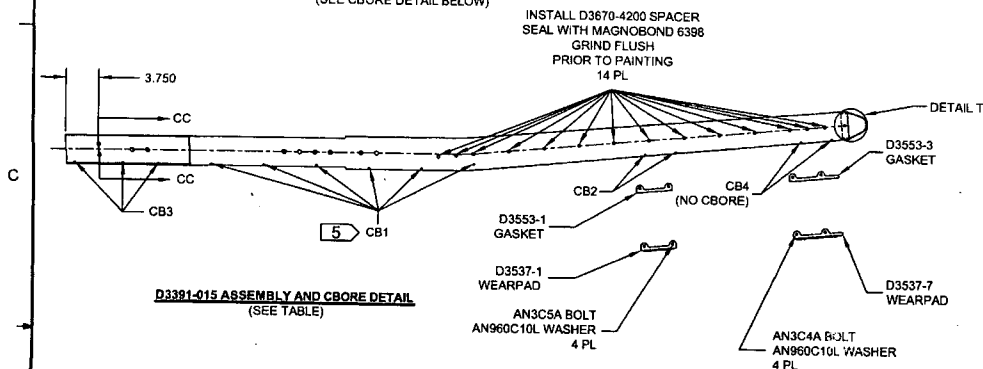
DEO ATTACHED

RELEASED
27-09-05-117

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CHECKED	5	DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 7 OF 8
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D3391-015 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)



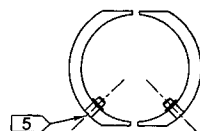
D3391-015 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

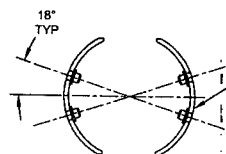
QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
		D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
14	14	AELS-1032-130	INSERT
12	12	AELS-1032-225	INSERT
4	4	ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER

CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	12	12	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130

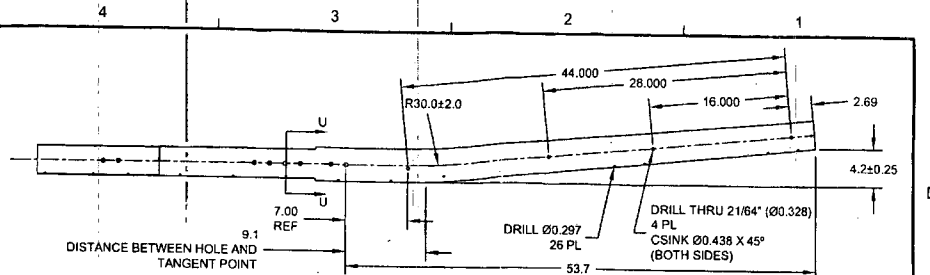


SECTION U-U
SCALE 3X

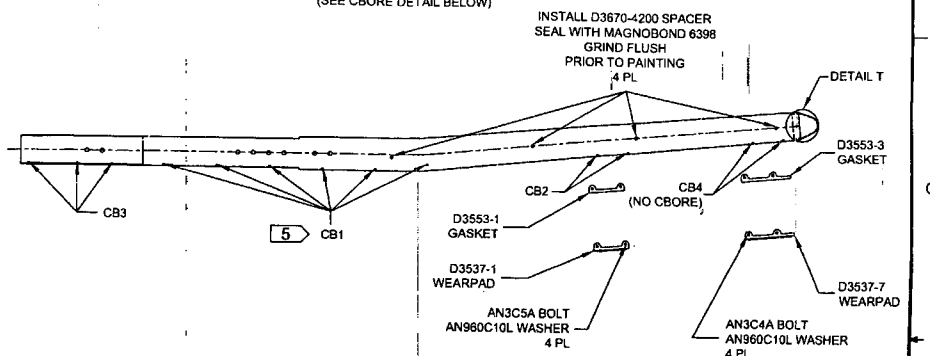


SECTION CC-CC
SCALE 3X

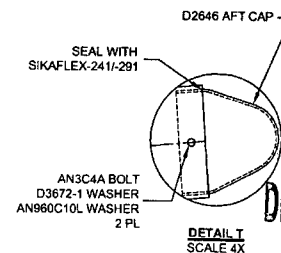
DRILL Ø0.391
CBORE Ø0.516 X 0.040 DEEP
INSTALL ALS4-428-165 INSERT
4 PL



D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)



D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)



DETAIL T
SCALE 4X

AN3C4A BOLT
D3672-1 WASHER
AN960C10L WASHER
2 PL

SEAL WITH
SIKAFLEX-241/-291

D2646 AFT CAP

RELEASED
08-09-05-14

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 8 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>MP</i>	CHECKED <i>h</i>	MFG. APPR. <i>AA</i>	APPROVED <i>MP</i>		DE APPR. <i>h</i>		
DATE 09.09.23	DATE 04.04.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

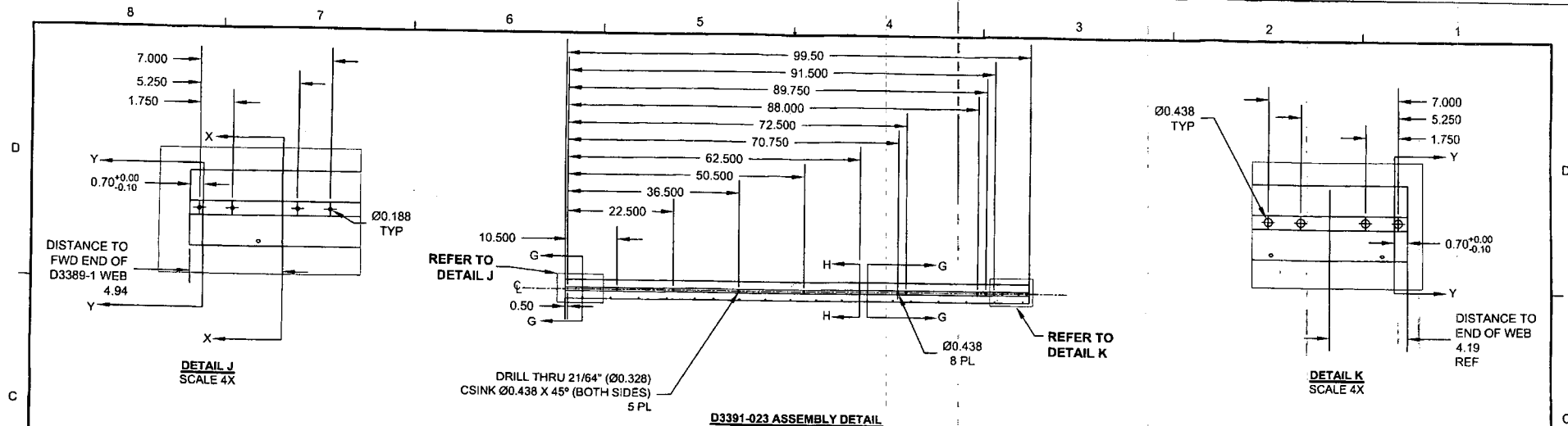
- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02
MP

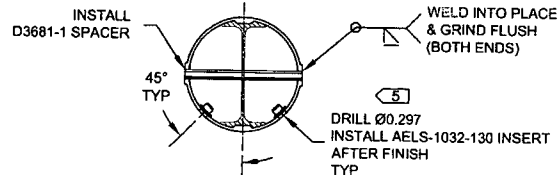
W/S 56732

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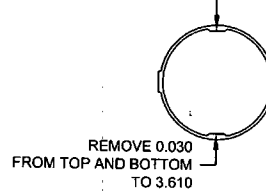
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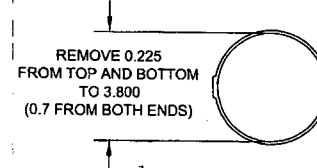
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

W10 56732

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 6 OF 8
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DEO ATTACHED
RELEASED
08-09-25 JW

DART AEROSPACE LTD		Work Order: 56732
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: H	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.00	✓			
3.500	+/-0.010	3.496	✓			
88.93	+/-0.030	88.980	✓			
44.995	+/-0.030	44.995	✓			
Ø3.200	+/-0.010	3.195	✓			
88.93	+/-0.030	88.960	✓			
Ø3.750	+/-0.010	Ø3.750	✓			
30° x 160" chamfer	+/-0.010	30° x 160"	✓			

Measured by: AWM Date: 10-3-17

Audited by: Date:

HAAS Section						
1.526	+0.000/-0.030	1.505	✓			
7.500	+/-0.010	7.495	✓			
27.750	+/-0.010	27.750	✓			
31.750	+/-0.010	31.750	✓			
35.250	+/-0.010	35.250	✓			
3.300	+/-0.010	3.295	✓			
0.200	+/-0.010	.185	✓			
3.520	+/-0.010	3.526	✓			
0.687	+0.010/-0.000	.687	✓			
R0.062	+/-0.010	R.062	✓			
Ø0.484	+0.005/-0.001	Ø.489	✓			

Measured by: AWM Date: 10/03/29

Audited by: AWM Date: 10/03/31

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	

